

# ICC-ES Evaluation Report

**ESR-2630**

Issued January 1, 2010

*This report is subject to re-examination in one year.*[www.icc-es.org](http://www.icc-es.org) | (800) 423-6587 | (562) 699-0543

A Subsidiary of the International Code Council®

**DIVISION: 10—SPECIALTIES****Section: 10710—Exterior Shutters****REPORT HOLDER:**

PlyFASTner, LLC  
1951 TEAKWOOD ROAD  
CHARLESTON, SOUTH CAROLINA 29414  
(843) 766-8199  
[www.plyfastner.com](http://www.plyfastner.com)

**EVALUATION SUBJECT****PlyFASTner™ PROTECTIVE PANEL CONNECTOR****1.0 EVALUATION SCOPE****Compliance with the following code:**2006 *International Building Code*® (IBC)**Property evaluated:**

Structural

**2.0 USES**

The PlyFASTner™ Protective Panel Connector is a system which includes a PlyFASTner™ bracket and a stainless steel lag. These connectors are used as an alternate to the fastening prescribed in IBC Table 1609.1.2 to hold wood structural panels over windows and doors during high-wind storms such as hurricanes. See Figure 1.

**3.0 DESCRIPTION**

The PlyFASTner™ Protective Panel Connector system is made up of six PlyFASTner™ brackets and six stainless steel lag bolts per protective panel. The maximum panel size is 4 feet by 8 feet (1.22 m by 2.44 m), over an opening of 3 feet 4 inches by 7 feet 4 inches (1.02 m by 2.24 m). The structural panel must be three-ply and a minimum of 1/2 inch (12.7 mm) thick. See Figure 2.

The PlyFASTner™ connectors have been tested to withstand a negative pressure on 4-foot-by-8-foot (1.22 m by 2.44 m) wood structural panels of up to 52 psf (2490 Pa).

**4.0 DESIGN AND INSTALLATION****4.1 General:**

The manufacturer's published installation instructions and this report must be strictly adhered to, and a copy of the instructions must be available at all times on the jobsite during installation. The instructions within this report

govern if there are any conflicts between the manufacturer's instructions and this report.

The elements supporting the connectors must be designed by a registered professional engineer for the wind loads shown in the codes.

Table 1 and Figure 2 indicate the spacing between fasteners using 1/2-inch-thick (12.7 mm) wood structural panels.

**4.2 Mounting to Wood:**

When mounting to wood for a wood or vinyl veneer construction, the stainless steel lag bolt must be embedded a minimum of 2 1/2 inches (63.5 mm) into the jack stud for the window or door which has a minimum specific gravity of 0.50.

When mounting to wood for a brick veneer construction, a hole must be drilled through the veneer so the stainless steel lag bolt can be embedded directly into the jack stud a minimum of 2 1/2 inches (63.5 mm). The jack stud must have a minimum specific gravity of 0.50.

**5.0 CONDITIONS OF USE**

The PlyFASTner™ Protective Panel Connector described in this report complies with, or is a suitable alternative to what is specified in, the code indicated in Section 1.0 of this report, subject to the following conditions:

- 5.1** The connectors must not be anchored in brick veneer. When used with brick veneer, the anchor must be embedded directly into the jack stud as indicated in Section 4.2.
- 5.2** The structural elements supporting the connectors must be designed by a registered professional engineer for the wind loads shown in the codes. The calculations must be signed, sealed, and dated, and submitted to the code official when application is made for a permit.
- 5.3** This report is limited to maximum 110 mph fastest mile wind zones or 130 mph (3-second gust) wind zones.
- 5.4** The center of gravity for the bracket must be below the head of the lag bolt when installed.
- 5.5** The connectors are limited to a mean roof height of 33 feet (10 m).

**6.0 EVIDENCE SUBMITTED**

- 6.1** Test report in accordance with ASTM E 1886 and SSTD 12-99.

- 6.2 Test report in accordance with ASTM E 330.
- 6.3 Test report in accordance with ASTM E 8.
- 6.4 PlyFASTner™ Design and Detail Report by Lindbergh and Associates.
- 6.5 Quality documentation.

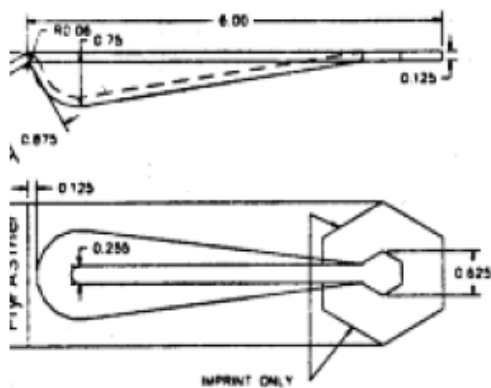
**7.0 IDENTIFICATION**

Each PlyFASTner™ Protective Panel Connector covered by this report must be labeled with the manufacturer's name, the product name (PlyFASTner™ Protective Panel Connector), and the evaluation report number (ESR-2630).

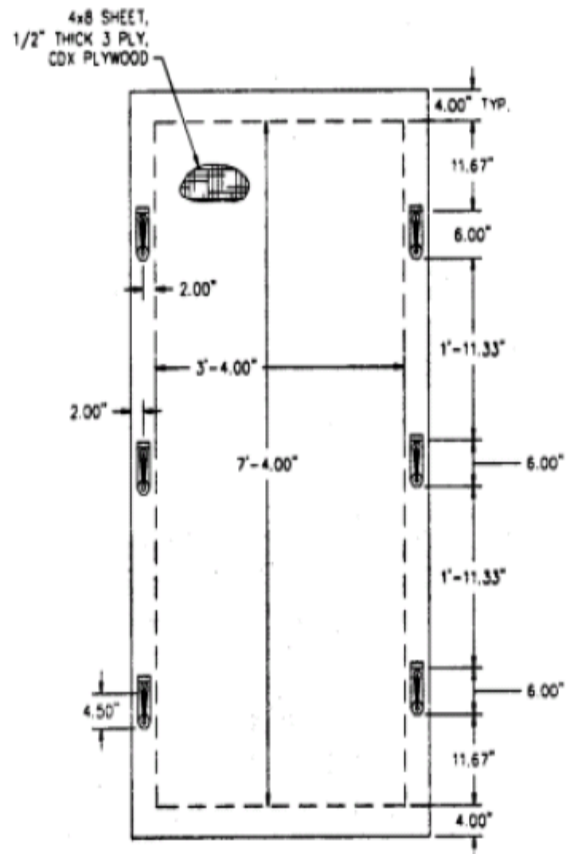
**TABLE 1—WINDBORNE DEBRIS PROTECTION FASTENER SCHEDULE FOR WOOD STRUCTURAL PANELS USING PlyFASTner™ CONNECTORS**

FASTENER TYPE	FASTENER SPACING (in.)			
	Panel Span ≤ 2 ft.	2 ft < Panel Span ≤ 4 ft.	4 ft < Panel Span ≤ 6 ft.	6 ft < Panel Span ≤ 8 ft.
PlyFASTner	30	30	15	15

**Note:** "Panel span" is defined as horizontal distance between PlyFASTners on opposite sides of an opening.



**FIGURE 1—PlyFASTner CONNECTOR DETAILS**



**FIGURE 2—PlyFASTner SYSTEM**

**ICC-ES Evaluation Report****ESR-2630 Supplement**

Issued January 1, 2010

*This report is subject to re-examination in one year.*[www.icc-es.org](http://www.icc-es.org) | (800) 423-6587 | (562) 699-0543

A Subsidiary of the International Code Council®

**DIVISION: 10—Specialties**  
**Section: 10710—Exterior Shutters****REPORT HOLDER:****PlyFASTner, LLC**  
**1951 TEAKWOOD ROAD**  
**CHARLESTON, SOUTH CAROLINA 29414**  
**(843) 766-8199**  
[www.plyfastner.com](http://www.plyfastner.com)**EVALUATION SUBJECT:****PlyFASTner™ PROTECTIVE PANEL CONNECTOR****1.0 EVALUATION SCOPE****Compliance with the following code:**2007 *Florida Building Code—Building***Property evaluated:**

Structural

**2.0 PURPOSE OF THIS SUPPLEMENT**

This supplement is issued to indicate that the PlyFASTner™ Protective Panel Connector described in Sections 2.0 through 7.0 of the master report complies with the 2007 *Florida Building Code—Building*, when designed and installed in accordance with the master evaluation report.

Use of the PlyFASTner™ Protective Panel Connector described in the master evaluation report for compliance with the High-Velocity Hurricane Zone provisions of the 2007 *Florida Building Code—Building* has not been evaluated, and is outside the scope of this supplement.

For products falling under Florida Rule 9B-72, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the master report issued January 1, 2010.